

In the Abstract:

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**ABSTRACT**

--The invention relates on the one hand to a method for providing a coating on the surfaces of a product with an open cell structure throughout its structure, in which said coating is provided by means of a plasma polymerisation process. The foam has to be prepared for the plasma polymerisation processes in respect to the specific process. Polymerisation is performed inside the open and semi-open cell structures in a qualitative and homogenous way. On the other hand, the invention relates to the use of a method as described above as a hydrophone, oleophobe, flame retardant and/or barrier coating on the surfaces of an open cell polymer throughout its polymer structure.